PowerPanel® Business Edition Installation Guide

For

Automatic Transfer Switch

Rev. 5

2015/12/2

Table of Contents

Introduction **3**

Hardware Installation **3**

Install PowerPanel® Business Edition Software **4**

Installation on Windows 4

Installation on Linux 7

Installation in Text Mode 9

Installation on Mac 10

Installation on VMware ESXi and ESX 13

Installation on ESXi 13

Installation on ESX 14

Virtual Appliance Deployment on ESXi 14

Installation on XenServer 18

Installation on Hyper-V Server 18

Access PowerPanel® Business Edition Software Interface **18**

Quick Configuration 19

Configure Power Protection for Computers **19**

Import Profile 20

Configure Authentication 20

Assign IP Address of ATS and Connected Outlet in Client 20

Configure Shutdown Settings 20

Setup Necessary Shutdown Time 21

Configure Shutdown Action for ESXi 21

Configure Startup and Shutdown of Virtual Machines on ESX/ESXi 21

Configure Shutdown of Virtual Machines on Hyper-V Server 22

Configure Actions for Essential Events 24

Make Sure Power Configuration is Correct 25

Mass Deployment **25**

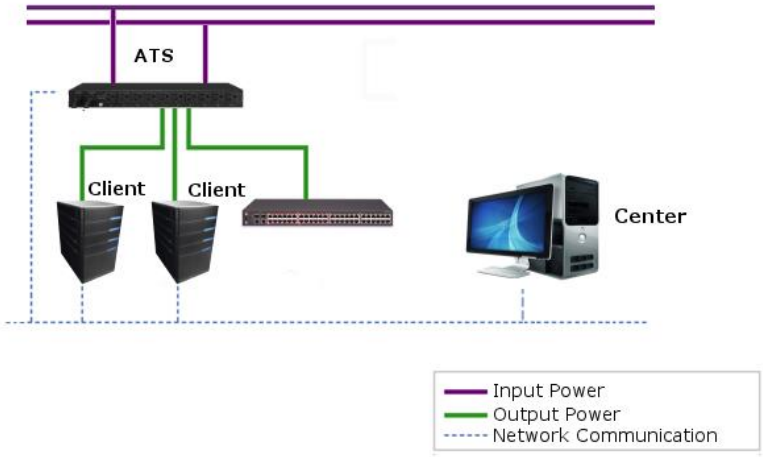
Manage ATS in Center **26**

Add ATS units 26

Introduction

An **Automatic Transfer Switch** (ATS) has dual input power to supply the reliable power to your connected equipment. The dual input power cords are divided into primary and secondary power sources. If the primary power source fails or is unstable, the ATS will seamlessly switch to the secondary power source without interrupting loads until the primary power source restores or become stable.

The PowerPanel® Business Edition Client can interact with ATS and receive the ATS state via the network. It also provides the power output control to individual outlets and accepts commands to turn off or turn on outlets. When an ATS turns off an outlet or the power source fails, any connected computer running Client is shut down in an orderly fashion, preventing data loss or a system crash due to an immediate power loss. Refer to the illustration below.



PowerPanel® Business Edition Center allows the administrator to simultaneously monitor the status and events from multiple ATS. The Center establishes communication with multiple ATS via the network and sends commands to each ATS to turn off or turn on the outlets. The computers which have been installed the Client will initiate the shutdown prior to turning off outlets.

PowerPanel® Business Edition software can be installed on various platforms including Windows, Linux, Citrix XenServer and VMware ESX/ESXi. Following sections describe conditions specific to these platforms individually.

Hardware Installation

One single ATS can provide the reliable power to computers. When the power source fails or becomes unstable, ATS can seamlessly provide the power from another power source to computers able to continue functioning well.

Before installing the PowerPanel® Business Edition software, please refer to the **Automatic Transfer Switch User's Manual** to make sure that the following hardware installations are configured properly:

- Verify the computer’s power is connected to the ATS outlet properly.
- Verify the computer’s network is connected.
- Verify the ATS’s network is connected.

The ATS whose power sources connect with an UPS will be protected by UPS. In the event of power failure or blackout, UPS will provide the battery power to ATS.

When **ATS connects one of power sources with the UPS**, this power source can be assigned as the primary input power which is being supplied to the computers can be protected. In case of UPS power failure or blackout, ATS can continue providing power from another power source to keep the computers running.

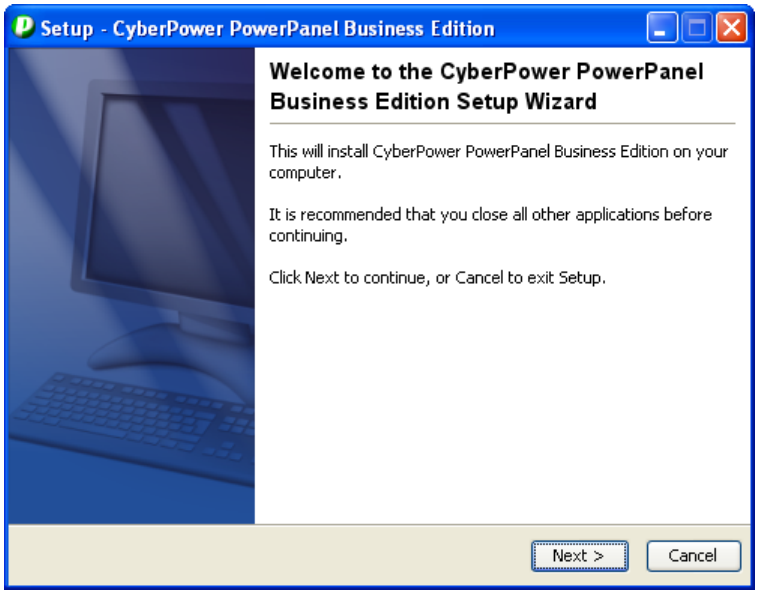
When **ATS connects two power sources with different UPS**, the computers can continue running no matter which ATS power source is being supplying power. If one UPS power fails or becomes abnormal, ATS will switch to another power source from another UPS for the computers to function well. The computer will have sufficient time to complete the shutdown procedure.

Install PowerPanel® Business Edition Software

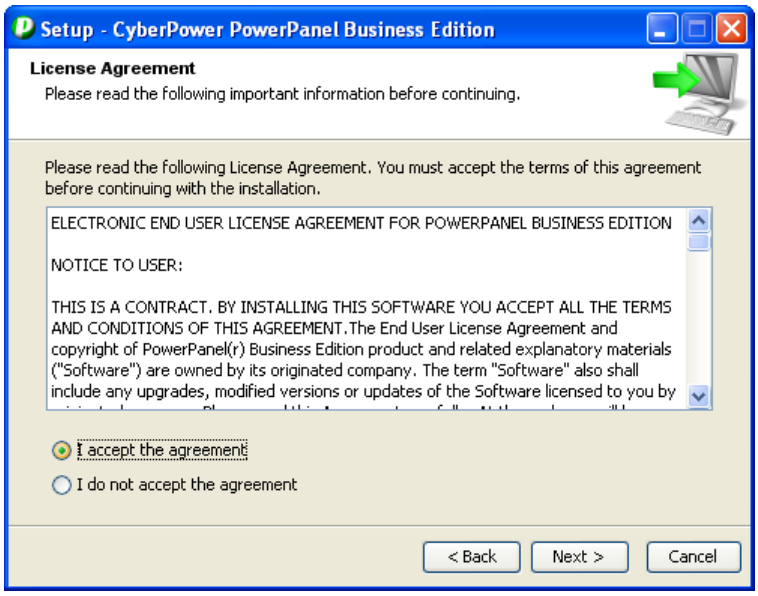
Installation on Windows

A popup page will be displayed automatically when inserting the installation CD. Users can click the **Install PowerPanel Business Edition software** shortcut on the popup page to initiate the installation procedure. If the popup page is not displayed when inserting the CD, browse to the CD drive and open the folder which locates at **/Software/Windows**, and then double click the file named **Setup.exe** to start the installation procedure. To install follow these steps:

- Click the **Next** button to start an installation.

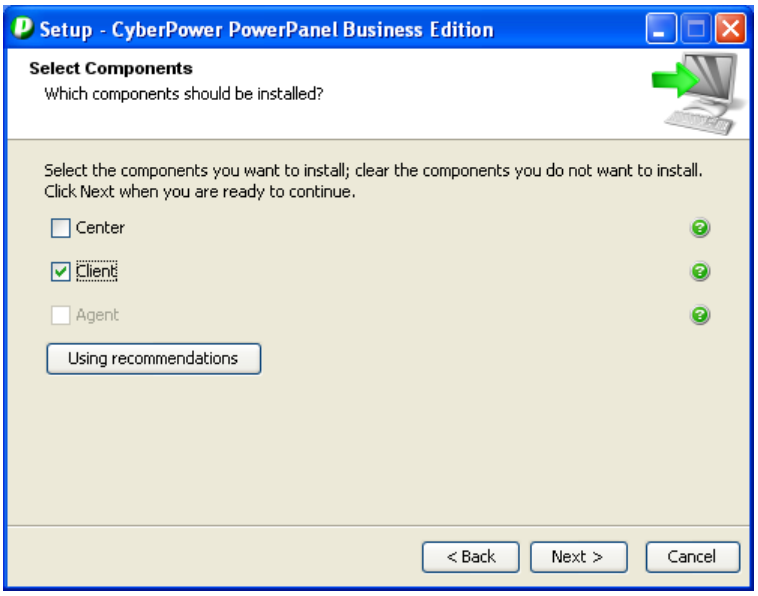

Setup - CyberPower PowerPanel Business Edition
Welcome to the CyberPower PowerPanel Business Edition Setup Wizard
This will install CyberPower PowerPanel Business Edition on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

- Accept the license agreement.

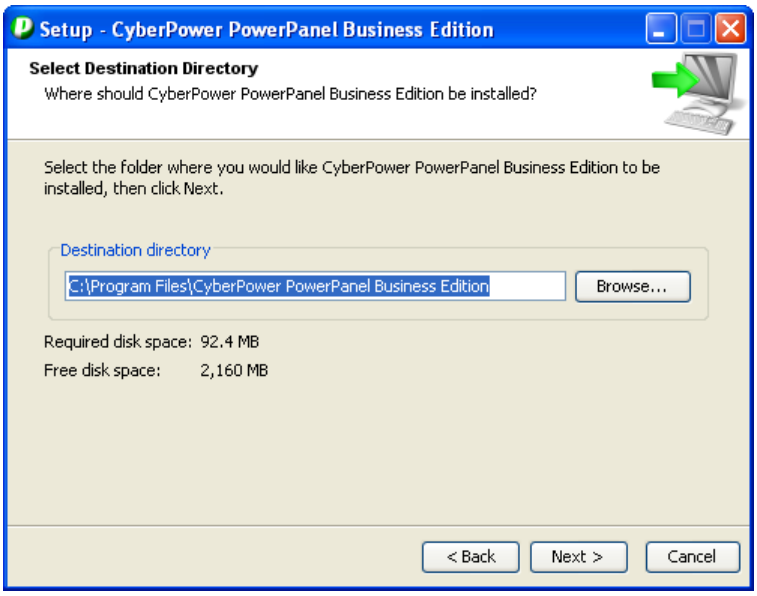

Setup - CyberPower PowerPanel Business Edition
License Agreement
Please read the following important information before continuing.
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.
ELECTRONIC END USER LICENSE AGREEMENT FOR POWERPANEL BUSINESS EDITION
NOTICE TO USER:
THIS IS A CONTRACT. BY INSTALLING THIS SOFTWARE YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT. The End User License Agreement and copyright of PowerPanel(r) Business Edition product and related explanatory materials ("Software") are owned by its originated company. The term "Software" also shall include any upgrades, modified versions or updates of the Software licensed to you by
I accept the agreement
I do not accept the agreement
< Back
Next >
Cancel

- **Choose the component.** In order to monitor multiple ATS units, Center should be installed. In order to monitor on a single computer powered by the ATS, Client should be installed.

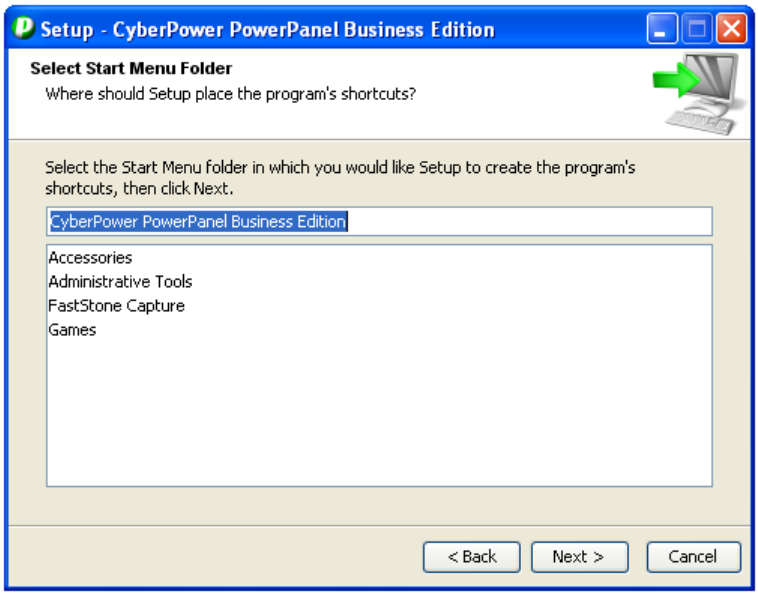
  Note: *Agent should not be selected because of ability to access to UPS instead of ATS.*


Setup - CyberPower PowerPanel Business Edition
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Center
Client
Agent
Using recommendations
< Back
Next >
Cancel

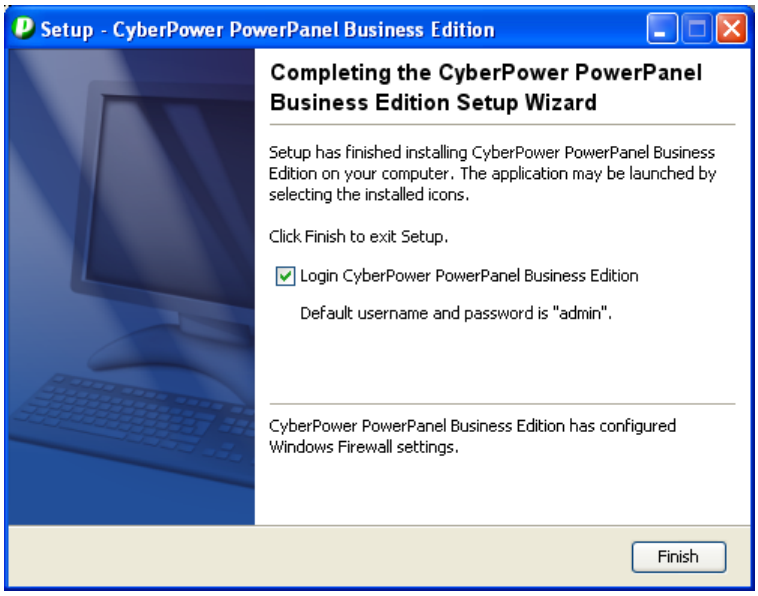
- Choose the destination directory.


Setup - CyberPower PowerPanel Business Edition
Select Destination Directory
Where should CyberPower PowerPanel Business Edition be installed?
Select the folder where you would like CyberPower PowerPanel Business Edition to be installed, then click Next.
Destination directory
C:\Program Files\CyberPower PowerPanel Business Edition
Browse...
Required disk space: 92.4 MB
Free disk space: 2,160 MB
< Back
Next >
Cancel

- Choose the start menu folder.


Setup - CyberPower PowerPanel Business Edition
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Select the Start Menu folder in which you would like Setup to create the program's shortcuts, then click Next.
CyberPower PowerPanel Business Edition
Accessories
Administrative Tools
FastStone Capture
Games
< Back
Next >
Cancel

- Click the **Finish** button to complete the installation.


Setup - CyberPower PowerPanel Business Edition
Completing the CyberPower PowerPanel Business Edition Setup Wizard
Setup has finished installing CyberPower PowerPanel Business Edition on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Login CyberPower PowerPanel Business Edition
Default username and password is "admin".
CyberPower PowerPanel Business Edition has configured Windows Firewall settings.
Finish

Installation on Linux

The installer requires root permission to install the Client. The installation wizard will guide users to complete the installation. Initiate an installation wizard by running the **./ppbe-linux-x86.sh** command or double clicking **ppbe-linux-x86.sh** from the desktop on 32-bit systems. Initiate an installation wizard by running the **/.ppbe-linux-x64.sh** command or double clicking **ppbe-linux-x64.sh** from desktop on 64-bit systems.

Note: *On Linux systems, users may mount the CD by use the mount command. Execute* ***mount –t iso9660 /dev/cdrom /mnt/cdrom*** *as a root user. /dev/cdrom is the CD drive and /mnt/cdrom will be the mount point.*

To install follow these steps:

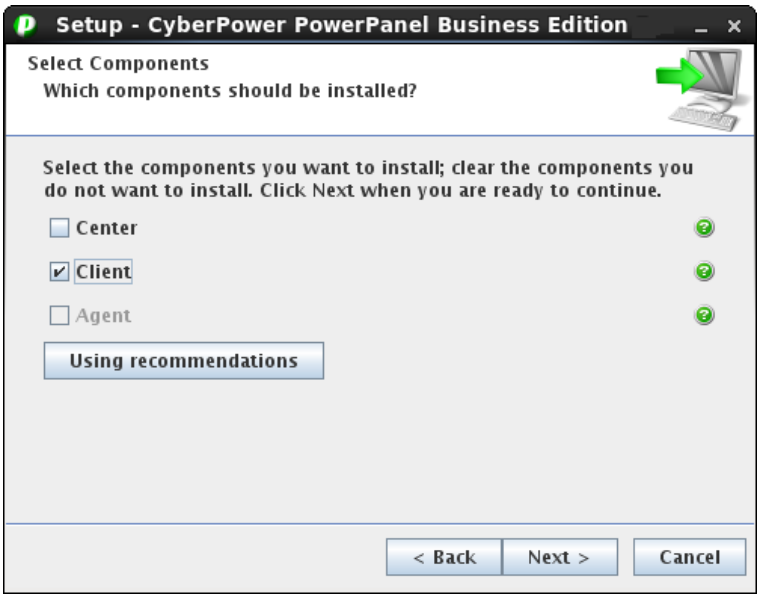
- Click the **Next** button to start an installation.

Setup - CyberPower PowerPanel Business Edition
Welcome to the CyberPower PowerPanel Business Edition Setup Wizard
This will install CyberPower PowerPanel Business Edition on your computer. The wizard will lead you step by step through the installation.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

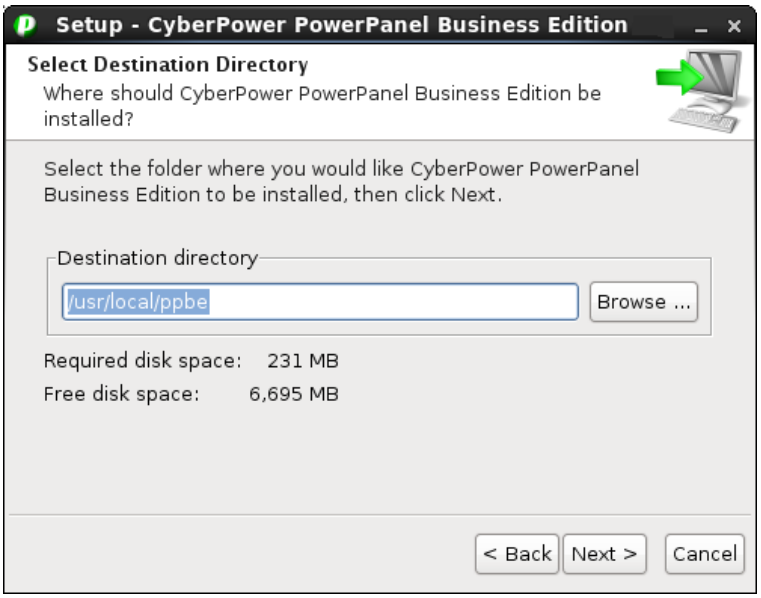
- Accept the license agreement.

Setup - CyberPower PowerPanel Business Edition
License Agreement
Please read the following important information before continuing.
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.
ELECTRONIC END USER LICENSE AGREEMENT FOR CYBERPOWER POWERPANEL BUSINESS EDITION
NOTICE TO USER:
THIS IS A CONTRACT. BY INSTALLING THIS SOFTWARE YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT.
I accept the agreement
I do not accept the agreement
< Back
Next >
Cancel

- **Choose the component.** In order to simultaneous monitor multiple ATS, the Center should be installed. If one single computer which is powered by the ATS requiring protection, the Client should be installed. ***Note: Agent*** *should not be selected because of ability to access to UPS instead of ATS.*


Setup - CyberPower PowerPanel Business Edition
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Center
Client
Agent
Using recommendations
< Back
Next >
Cancel

- Choose the destination directory.


Setup - CyberPower PowerPanel Business Edition
Select Destination Directory
Where should CyberPower PowerPanel Business Edition be installed?
Select the folder where you would like CyberPower PowerPanel Business Edition to be installed, then click Next.
Destination directory
/usr/local/ppbe
Browse ...
Required disk space: 231 MB
Free disk space: 6,695 MB
< Back
Next >
Cancel

- Click the **Finish** button to complete the installation**.**

Setup - CyberPower PowerPanel Business Edition
Completing the CyberPower PowerPanel Business Edition Setup Wizard
Setup has finished installing CyberPower PowerPanel Business Edition on your computer. The application may be launched by executing the installed start scripts.
Click Finish to exit Setup.
Login CyberPower PowerPanel Business ...
Default username and password is "adm...
Finish

Installation in Text Mode

When the system does not support graphic mode, the Linux installation needs to be initiated in the terminal by using the **./ppbe-linux-x86.sh -c** command on 32-bit systems or use **./ppbe-linux-x86_64.sh -c** command on 64-bit systems.

The installation procedure will be initiated as following steps:

- Press **Enter** to start an installation.

```
Starting Installer ...
This will install CyberPower PowerPanel Business Edition on your computer.
OK [o, Enter], Cancel [c]
```

- **Accept the license agreement.**

```
YOUR ACCEPTANCE OF THE FOREGOING AGREEMENT WAS INDICATED DURING
INSTALLATION.

I accept the agreement
Yes [1], No [2]
```

- Determine to use recommendation before selecting the components. Select **n** to ignore the recommendation.

```
Select the components you want to install; clear the components you do not
want to install. Click Next when you are ready to continue.
Using recommendations
Yes [y, Enter], No [n]
```

- **Choose the component.** In order to simultaneous monitor multiple ATS, Center should be installed. If one single computer which is powered by the ATS requiring protection, Client should be installed.

  ***Note: Agent** should be not selected because of ability to access to UPS instead of ATS.*

```
Which components should be installed?
1: Center
2: Client
3: Agent
Please enter a comma-separated list of the selected values or [Enter] for the de
fault selection:
```

- **Choose the destination location.**

```
Where should CyberPower PowerPanel Business Edition be installed?
[/usr/local/ppbe]
```

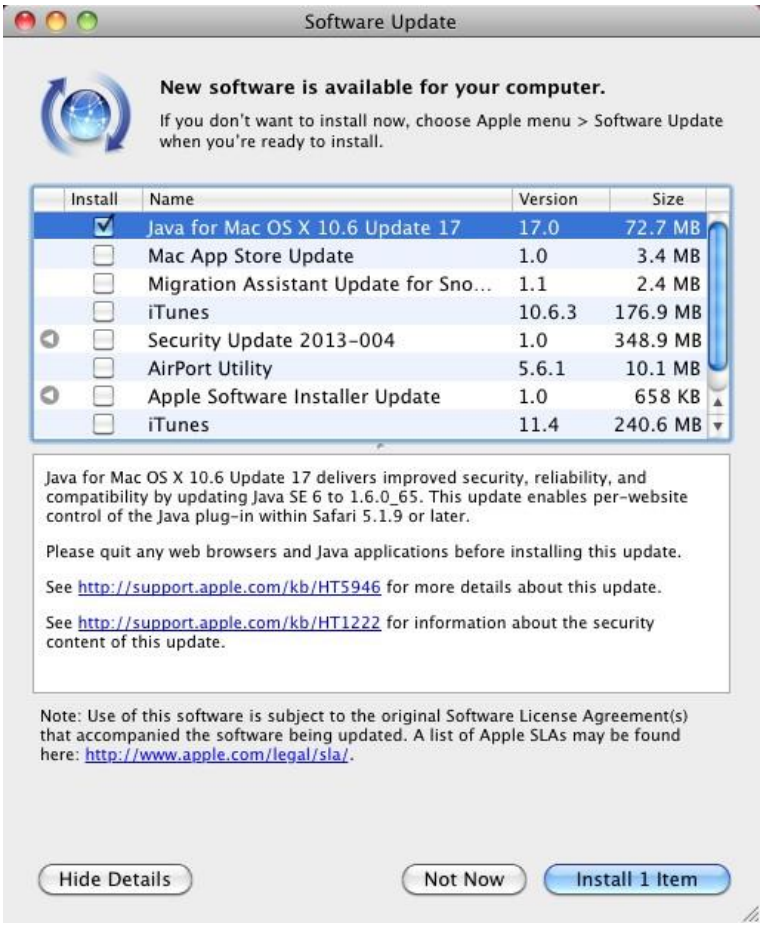
- Installation procedure starts and once finished. It will end automatically.

```
Please wait for CyberPower PowerPanel Business Edition configuring
Default username and password is "admin".
CyberPower PowerPanel Business Edition may not do hibernation.
Finishing installation...
```

Installation on Mac

File folder will be displayed automatically when inserting the PowerPanel® Business Edition installation CD. Find the installer in the **/Software/Mac** folder, and double click the file named **Setup.dmg**, then in the same way double click the file named **CyberPower PowerPanel Business Edition Installer** to initiate the wizard. The installation wizard will guide users in completing the installation.

***Note:** If PPBE service stopped in unexpected conditions and the OS X version is 10.6 or earlier. Please update Java to the latest version via **Software Update**, then execute **restartService.sh** to restart PPBE service, the default file path is **/Applications/ppbe/bin/restartService.sh**.*


Software Update
New software is available for your computer.
If you don't want to install now, choose Apple menu > Software Update when you're ready to install.
Install
Name
Version
Size
Java for Mac OS X 10.6 Update 17
17.0
72.7 MB
Mac App Store Update
1.0
3.4 MB
Migration Assistant Update for Sno...
1.1
2.4 MB
iTunes
10.6.3
176.9 MB
Security Update 2013-004
1.0
348.9 MB
AirPort Utility
5.6.1
10.1 MB
Apple Software Installer Update
1.0
658 KB
iTunes
11.4
240.6 MB
Java for Mac OS X 10.6 Update 17 delivers improved security, reliability, and compatibility by updating Java SE 6 to 1.6.0_65. This update enables per-website control of the Java plug-in within Safari 5.1.9 or later.
Please quit any web browsers and Java applications before installing this update.
See http://support.apple.com/kb/HT5946 for more details about this update.
See http://support.apple.com/kb/HT1222 for information about the security content of this update.
Note: Use of this software is subject to the original Software License Agreement(s) that accompanied the software being updated. A list of Apple SLAs may be found here: http://www.apple.com/legal/sla/.
Hide Details
Not Now
Install 1 Item

Note: Cyberpower PowerPanel® Business Edition *software is a third-party application. At the first time to launch the PPBE installer on the Mac OS X 10.8(or later version), you should do following:*

1.Right-click the Installer and choose "Open".

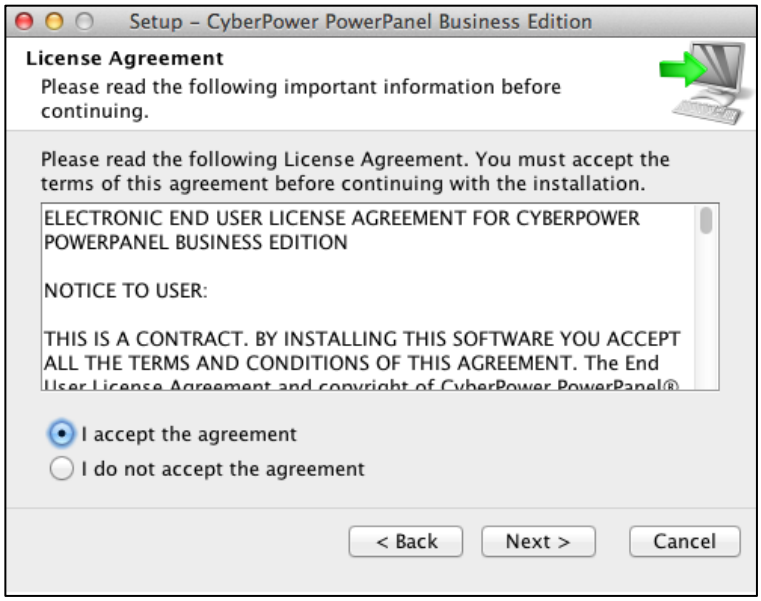
2. Choose "Open" again at the dialog to open it.

To install follow these steps:

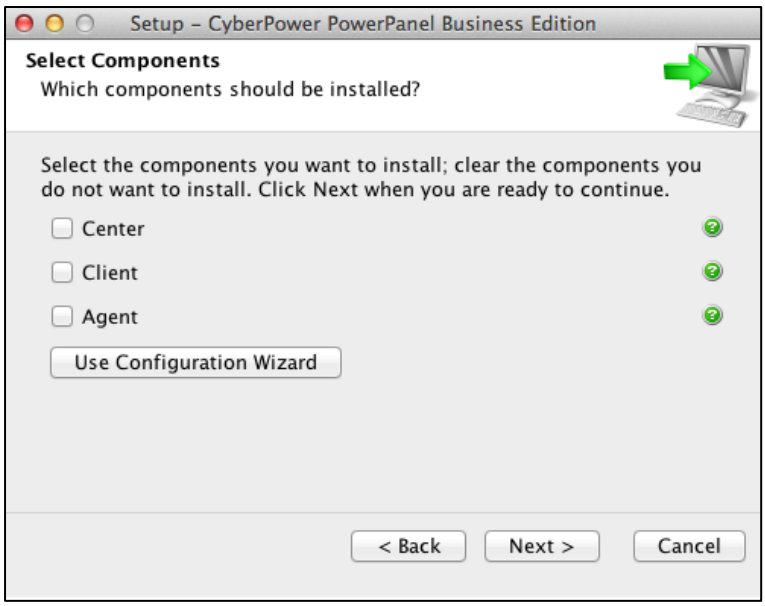
- Click the **Next** button to start an installation.

Setup - CyberPower PowerPanel Business Edition
Welcome to the CyberPower PowerPanel Business Edition Setup Wizard
This will install CyberPower PowerPanel Business Edition on your computer. The wizard will lead you step by step through the installation.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

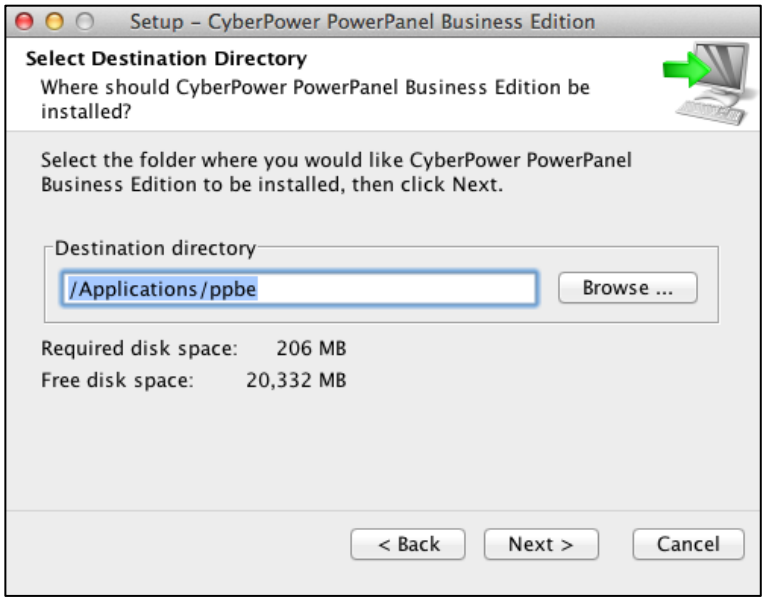
- Accept the license agreement.


Setup – CyberPower PowerPanel Business Edition
License Agreement
Please read the following important information before continuing.
Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.
ELECTRONIC END USER LICENSE AGREEMENT FOR CYBERPOWER POWERPANEL BUSINESS EDITION
NOTICE TO USER:
THIS IS A CONTRACT. BY INSTALLING THIS SOFTWARE YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT. The End
I accept the agreement
I do not accept the agreement
< Back
Next >
Cancel

- **Choose the component.** If one single computer is connected to the UPS directly via a USB or serial connection, Agent should be installed. If the computer is powered by a UPS already connected to an Agent, has a remote management card installed or is connected to a PDU, Client should be installed. If the administrator requires simultaneous monitoring and access to multiple UPS/PDU/ATSs, equipment and computers on a local network, Center should be installed.


Setup – CyberPower PowerPanel Business Edition
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Center
Client
Agent
Use Configuration Wizard
< Back
Next >
Cancel

- Choose the destination directory.


Setup – CyberPower PowerPanel Business Edition
Select Destination Directory
Where should CyberPower PowerPanel Business Edition be installed?
Select the folder where you would like CyberPower PowerPanel Business Edition to be installed, then click Next.
Destination directory
/Applications/ppbe
Browse ...
Required disk space: 206 MB
Free disk space: 20,332 MB
< Back
Next >
Cancel

- Click the **Finish** button to complete the installation**.**

Setup – CyberPower PowerPanel Business Edition
Completing the CyberPower PowerPanel Business Edition Setup Wizard
Setup has finished installing CyberPower PowerPanel Business Edition on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Login CyberPower PowerPanel Business Edi...
Default username and password is "admin".
Finish

Installation on VMware ESXi and ESX

Installation on ESXi

Installation must be launched in the **vMA** (**vSphere Management Assistant**) which is also a virtual machine on the ESXi host. In order to deploy vMA on the ESXi host and install PPBE in the vMA, users must install the **vSphere Client** tool on another remote computer first. To download the vSphere Client installer, users can enter the ESXi host IP address to access the web page. Users can visit **VMware** website for ***vSphere Management Assistant Guide document*** about vMA deployment on VMware ESXi.

The installer will guide users in completing the installation. Refer to Installation on Text Mode section to follow the same steps to complete installation. The installer requires root permission to initiate the installation procedure. Mount CD by running **mount -t iso9660 /dev/cdrom /mnt/cdrom** as a root user.(**/dev/cdrom** is the CD drive and **/mnt/cdrom** will be the mount point.). Browse the CD drive and find the installer in the **/Software/Linux** folder. Initiate an installation procedure by running the **./ppbe-linux-x86_64.sh** command.

Note: *In order to allow the interactions between physical and virtual machines, VMware tools have to be installed on each virtual machine. Refer to VMware ESX/ESXi Server documentation for further information about VMware Tools.*

Installation on ESX

Installation must be launched in the **Service Console** (aka **Console Operation System**). To initiate the installation procedure on VMware ESX also requires root permission. Use the same command to mount CD and initiate the installation procedure. Refer to Installation on Text Mode section to complete the installation.

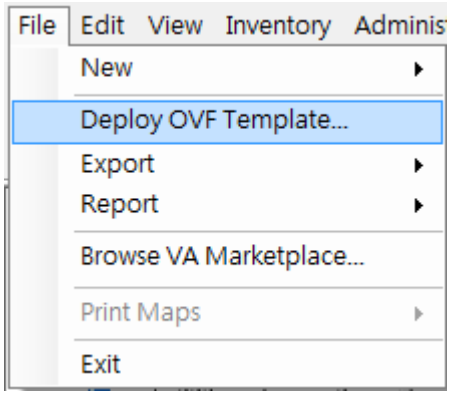
Virtual Appliance Deployment on ESXi

A virtual appliance (VA) is a prebuilt software solution, comprised of one or more virtual machines that is packaged, maintained, updated and managed as a unit. It is fundamentally changing how software is developed, distributed, deployed and managed.

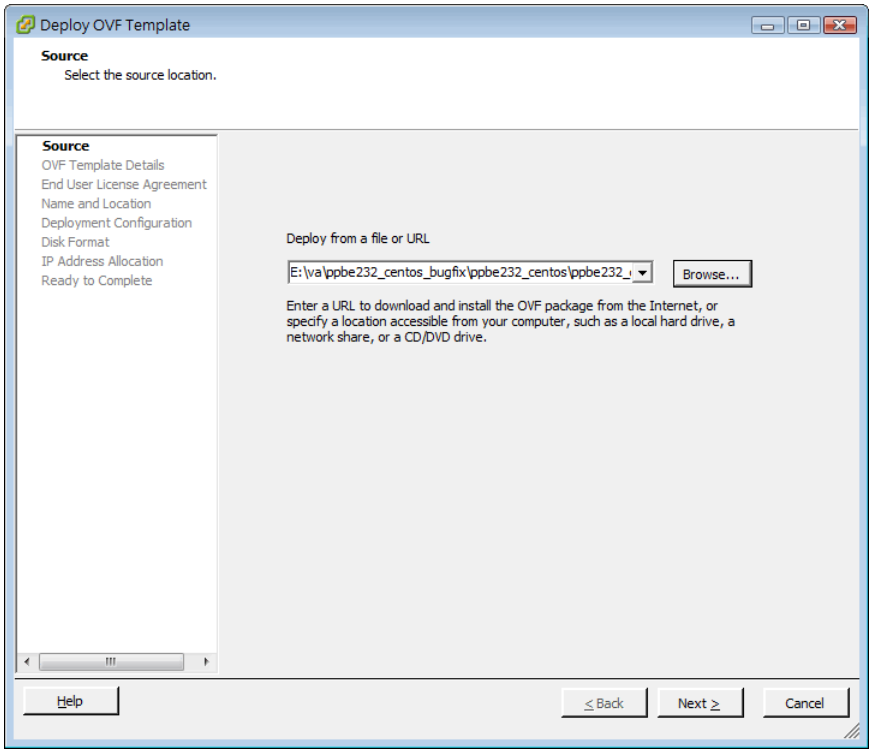
Download the PPBE virtual appliance which is pre-installed Client from CyberPower. In order to deploy the PPBE virtual appliance on VMware ESXi host, users must install **vSphere Client** tool first on another remote computer. To download the **vSphere Client** installer, users can enter the ESXi host IP address to access web page of ESXi host.

The deployment procedure will be initiated as below steps:

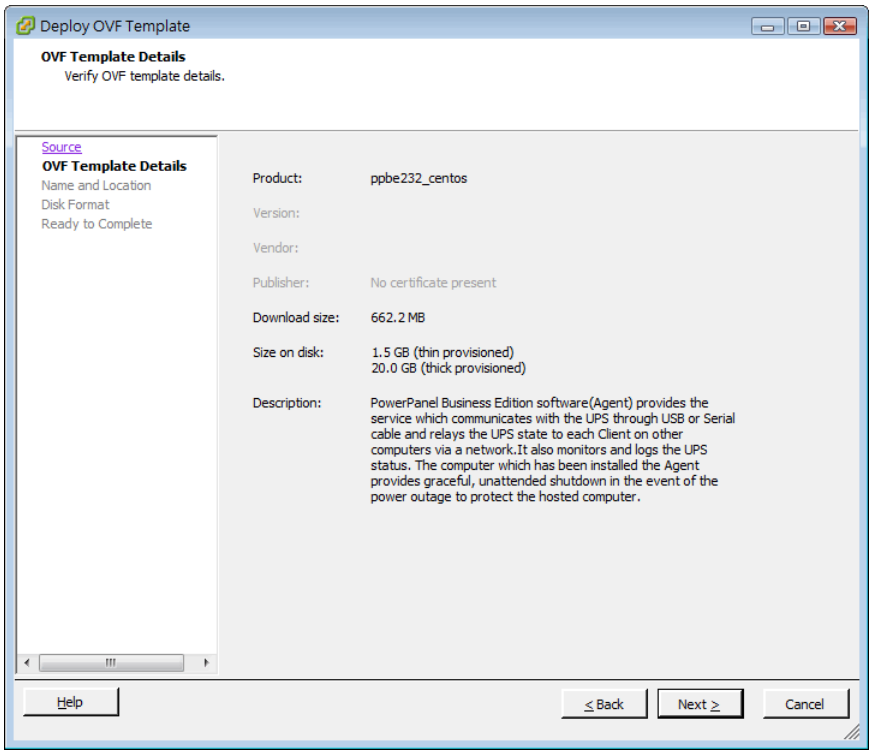
- Launch the vShpere Client. Open the **Deploy OVF Template** window from **File > Deploy OVF Template…** item.



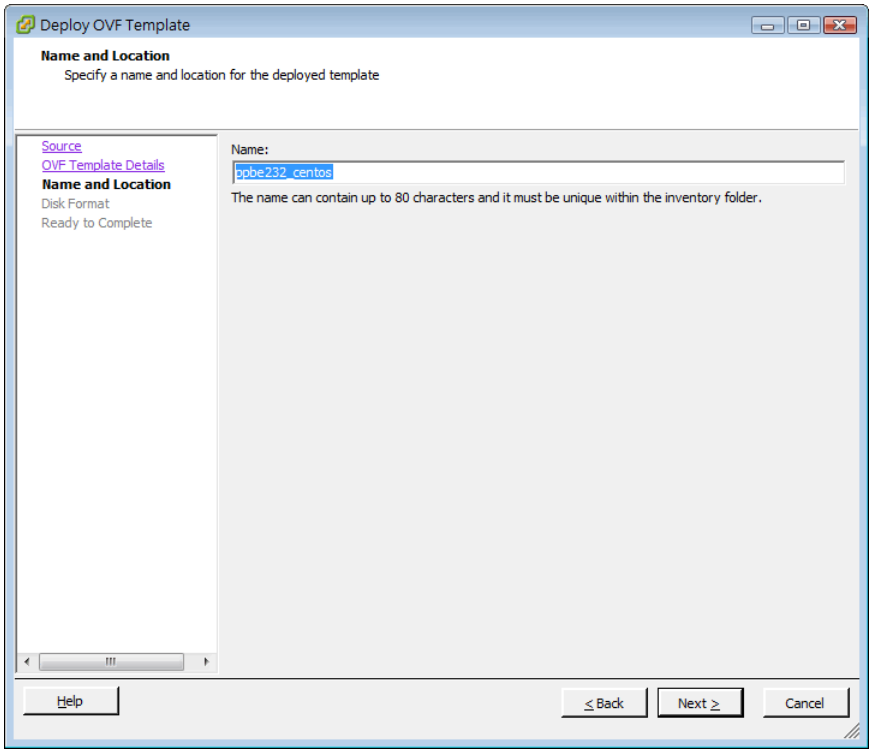
- Click **Browse** to import the **ppbeXXX_centos.ovf** extracted from the download zip file. Click **Next** to start a deployment task.


Deploy OVF Template
Source
Select the source location.
Source
OVF Template Details
End User License Agreement
Name and Location
Deployment Configuration
Disk Format
IP Address Allocation
Ready to Complete
Deploy from a file or URL
E:\va\ppbe232_centos_bugfix\ppbe232_centos\ppbe232_
Browse...
Enter a URL to download and install the OVF package from the Internet, or specify a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive.
Help
< Back
Next >
Cancel

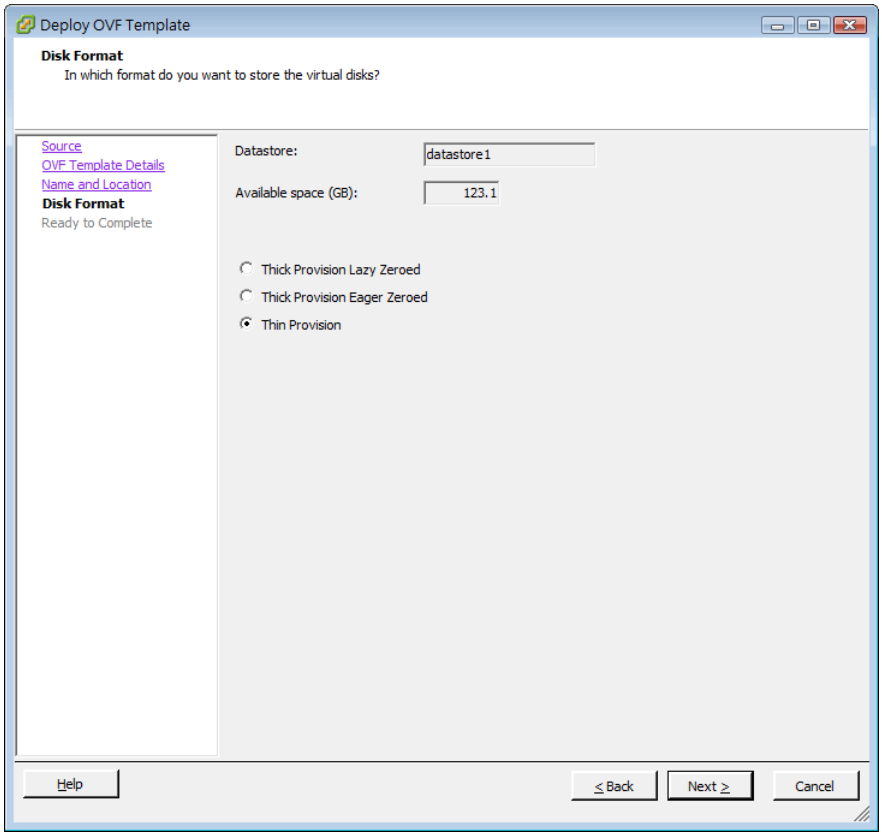
- The OVF template detail is displayed. Click **Next** to continue.


Deploy OVF Template
OVF Template Details
Verify OVF template details.
Source
OVF Template Details
Name and Location
Disk Format
Ready to Complete
Product: ppbe232_centos
Version:
Vendor:
Publisher: No certificate present
Download size: 662.2 MB
Size on disk: 1.5 GB (thin provisioned)
20.0 GB (thick provisioned)
Description: PowerPanel Business Edition software(Agent) provides the service which communicates with the UPS through USB or Serial cable and relays the UPS state to each Client on other computers via a network.It also monitors and logs the UPS status. The computer which has been installed the Agent provides graceful, unattended shutdown in the event of the power outage to protect the hosted computer.
Help
< Back
Next >
Cancel

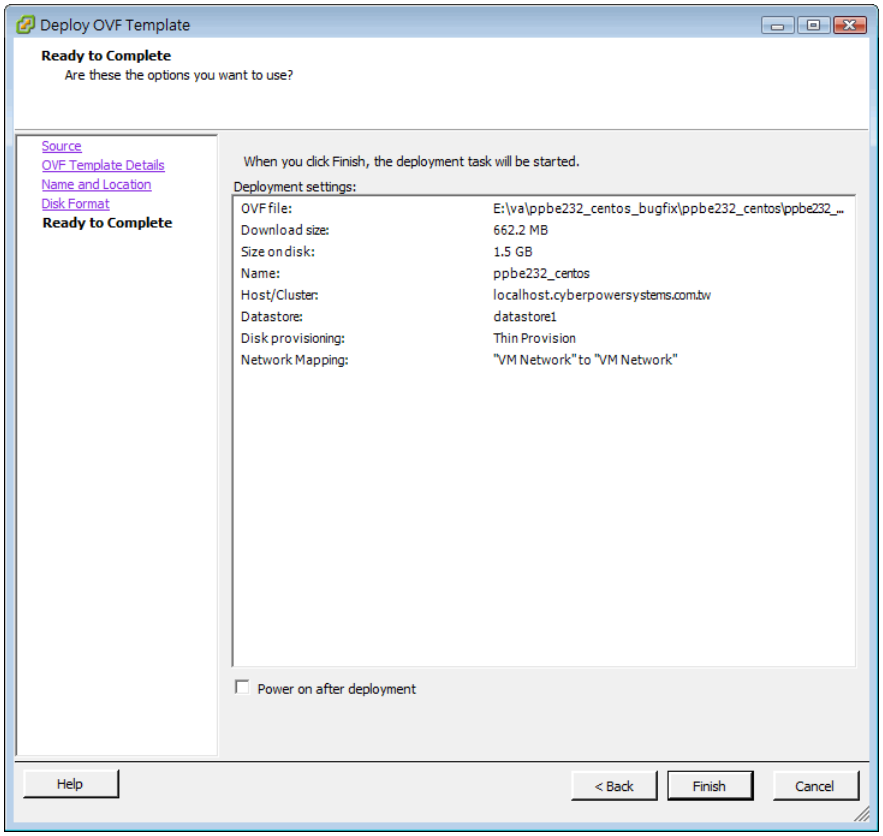
- Enter the name for the deployed PPBE virtual appliance. This name should be unique within the inventory.



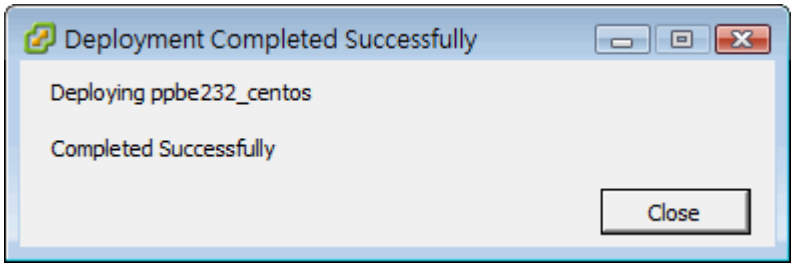
- Select the virtual disk format for the PPBE virtual appliance. The default option is **Thin Provision**. Refer to About Virtual Disk Provision Disk Policies for further information about how to select virtual disk format.



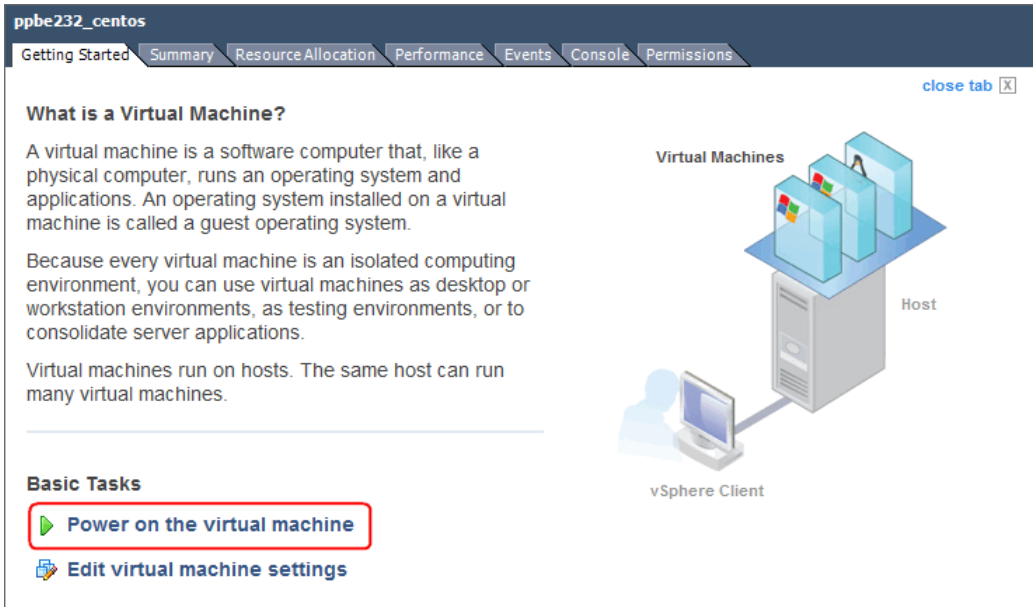
- A deployment detail is displayed. Click **Finish** to start the deployment task.



- After the deployment task is complete, the PPBE virtual appliance will be added into the inventory.



- Click **Power on the virtual machine** to power on the virtual machine and ready to access the Agent.


ppbe232_centos
Getting Started
Summary
Resource Allocation
Performance
Events
Console
Permissions
close tab
What is a Virtual Machine?
A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtual machine is called a guest operating system.
Because every virtual machine is an isolated computing environment, you can use virtual machines as desktop or workstation environments, as testing environments, or to consolidate server applications.
Virtual machines run on hosts. The same host can run many virtual machines.
Virtual Machines
Host
vSphere Client
Basic Tasks
Power on the virtual machine
Edit virtual machine settings

- Login the virtual appliance. The default username and password are **admin.** In order to perform shutdown

accurately, you must change the time zone settings of the virtual appliance.

This can be a direct copy of the time zone file from the **/usr/share/zoneinfo** folder. We assume that the host is located under the Chicago CST zone in Chicago, and the time zone can be changed by running the command **cp /usr/share/zoneinfo/America/Chicago /etc/localtime**.

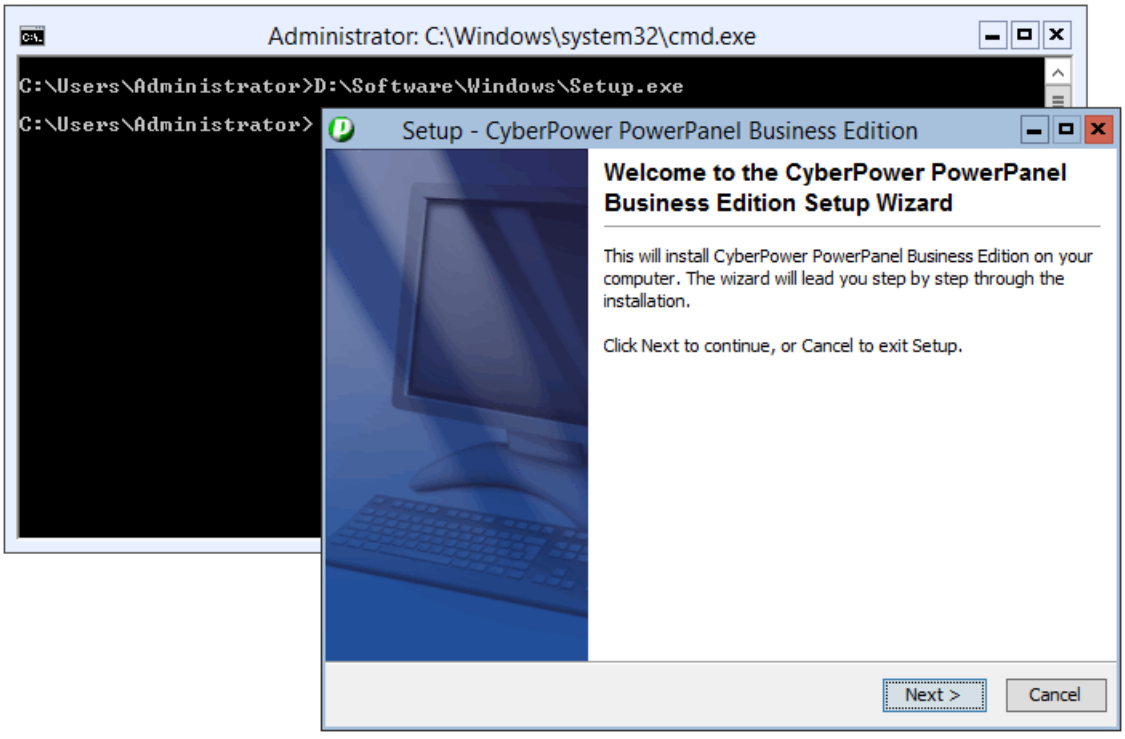
Installation on XenServer

The installer requires root permission to install the PowerPanel® Business Edition. Mount CD by running **mount -t iso9660 /dev/cdrom /mnt/cdrom** as a root user (**/dev/cdrom** is the CD drive and **/mnt/cdrom** will be the mount point.). Browse the CD drive and run **./ppbe-linux-x86.sh** command to initiate an installation procedure.

Installation must be launched on the **Dom0**. Refer to Installation on Text Mode section to complete the installation.

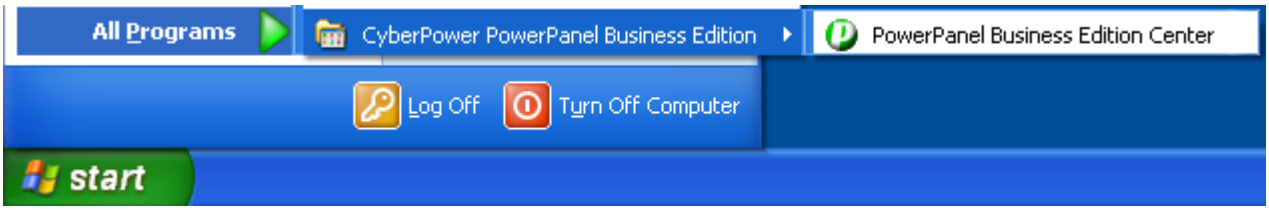
Installation on Hyper-V Server

Use the PowerPanel® Business Edition installation CD to complete the installation on the target computer. Run the ***<CD_Drive>\Software\Windows\setup.exe*** of the command prompt such as below illustration to start the installation procedure (***CD_Drive*** *is a CD drive formatted as* ***D:*** *or* ***E:***). A popup window will be displayed when the installation is launched. Refer to **Installation on Windows** section to follow the same steps to complete installation.


Administrator: C:\Windows\system32\cmd.exe
C:\Users\Administrator>D:\Software\Windows\Setup.exe
C:\Users\Administrator>
Setup - CyberPower PowerPanel Business Edition
Welcome to the CyberPower PowerPanel Business Edition Setup Wizard
This will install CyberPower PowerPanel Business Edition on your computer. The wizard will lead you step by step through the installation.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

Access PowerPanel® Business Edition Software Interface

To access the PowerPanel® Business Edition interface in Windows, go to **Start > All Programs > CyberPower PowerPanel Business Edition > PowerPanel Business Edition Center** (or **PowerPanel Business Edition Client**) which will take you to the login page.



On Linux, users can also enter the URL as **http://localhost:3052/** in the address of the web browser to access to the interface. Users can also enter the URL, **http://hosted_computer_ip_address:3052/** in the address of the web browser to access the interface from a remote computer. **hosted_computer_ip_address** is the IP address of the computer which has the PowerPanel® Business Edition installed. For vMA on the ESX or ESXi, **hosted_computer_ip_address** is the IP address of the vMA (**Note**: **hosted_computer_ip_address** is the IP address of the host computer on ESX.)

The default username is **admin** and default password is **admin.** For security purposes, it is recommended you change the login username and password after the initial login.

PowerPanel® Business Edition supports multiple-language function and allows users to change language. It will choose the suitable language as the default one to display at the initial access. Users can change the language from the banner. After the language is changed, the page will refresh automatically and choose the assigned language as the default one to display.

Quick Configuration

A Welcome screen will display at the first time to use Client. The welcome screen will lead you to complete the quick configuration. You can decide whether to continue or ignore it. It is strongly recommended to complete the quick configuration. Inability to complete the quick configuration may put your computer in the extreme risk when power events occur. If you decide to ignore the quick configuration, click the Exit button. A popup confirm dialog will display and click the Yes button to ignore the quick configuration. Refer to Import Profile section for further details about completing the quick configuration.

Configure Power Protection for Computers

In order to ensure the computers which connect to the ATS have sufficient time to complete the shutdown prior to the outlets turning off, the Client should be installed. The Client will establish communication with the ATS and receive

commands from the ATS to initiate a complete shutdown and avoid data loss or a system crash.

Import Profile

The **Profile Import** screen provides a shortcut to import your own profile to complete the quick configuration. If you would like to import a profile, click the **Yes** option and click the **Next** button to import the profile. A popup dialog will ask you to assign the profile. After the profile import is complete, Client will show the result on the **Finish** screen.

If you would like complete the quick configuration without profile, click the **No** option and click **Next** button to continue.

Configure Authentication

In order to secure and protect the network communication with Client and ATS, the security settings must be configured properly in the **Authentication** screen. The settings are used for authenticating the network communication between the Client and ATS.

The Secret Phrase is configured on the **General/Identification** page of the ATS web. The SNMP settings are configured on the **Network Service/SNMPv1 Service** and **Network Service/SNMPv3 Service** pages of the ATS web. When ATS is the power extension of the UPS, the settings should match with ones in UPS web. Click **Next** to the next step.

Assign IP Address of ATS and Connected Outlet in Client

Communication can be established through the network by assigning the IP address of the ATS on the **Power Source Assignment** screen in Client. In order to ensure the ATS can respond to the Client normally, the secret phrase or SNMP communities must be setup properly. It is also important to assign the correct ATS outlet which supplies power to Client computer to assure the Client can shut down the computer prior the turning off the outlet.

The Client connects to the ATS which is being supplying power by one UPS.

Users should choose the *ATS* option of *Power Connection* field, assign the IP address of the ATS at the *ATS Address* filed and the correct ATS outlet at the *ATS Outlet* field. The IP address of the UPS can be assigned at the according *UPS Address* field and assign *None* option at another *UPS Address* field. Click **Apply** to establish communication with the ATS between the UPS.

The Client connects to the ATS which is being supply power by two UPS.

Users should choose the *ATS* option of *Power Connection* field, assign the IP address of the ATS at the *ATS Address* filed and the correct ATS outlet at the *ATS Outlet* field. The IP addresses of two UPS also should be assigned to the according *UPS Address* field. Click **Apply** to establish communication with the ATS between the two UPS.

Configure Shutdown Settings

The **Shutdown Settings** screen allows you to specify the manner in which Client computer is shut down prior to a ATS outlet powering off, set the duration which Client will take to shut down. Even if Client requires shutting down the VMware ESXi host, you can specify the root permission and the ESXi host address.

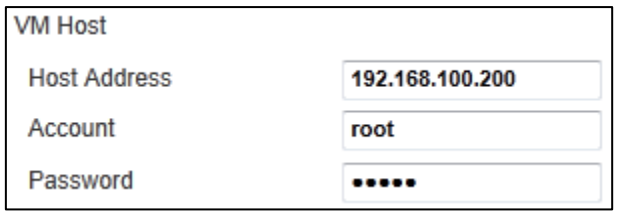
Setup Necessary Shutdown Time

Each computer running the Client requires a sufficient time to shut down completely before the ATS turns off the connected outlet for any reason. Therefore users can set up this sufficient time at the *Necessary shutdown time* option on the **Shutdown Settings** screen in the Client.

When the ATS outlet powering to a computer running the Client is going to be turned off, the outlet should not be turned off by the ATS until the Client computer is shut down completely. The Client will detect whether the off-delay time is sufficient for the Client computer to shut down gracefully and give a warning to users that the computer running the Client may be shut down improperly due to insufficient time. Click the **Setup** button in the warning block to set up a sufficient time for the *Delay Off Time* setting on the connected outlet of the ATS. Users can also set up a sufficient time on the *Delay Off Time* manually in the ATS web interface.

Configure Shutdown Action for ESXi

In order to ensure the ESXi server host and all virtual machines can be shut down correctly in case of power events, users have to configure the ESXi host address, account and password of the root user for the host shutdown from vMA. Because PowerPanel® Business Edition software must be installed on the Service Console of ESX instead of vMA, Event Action/Settings page don't provides these shutdown settings for user to configure. Fill in the *Host Address, Account* and *Password* fields with actual username and password for ESX/ESXi host.
Note: *Host Address is the IP address of the ESXi host computer on which vMA is operating but not the IP address of vMA.*

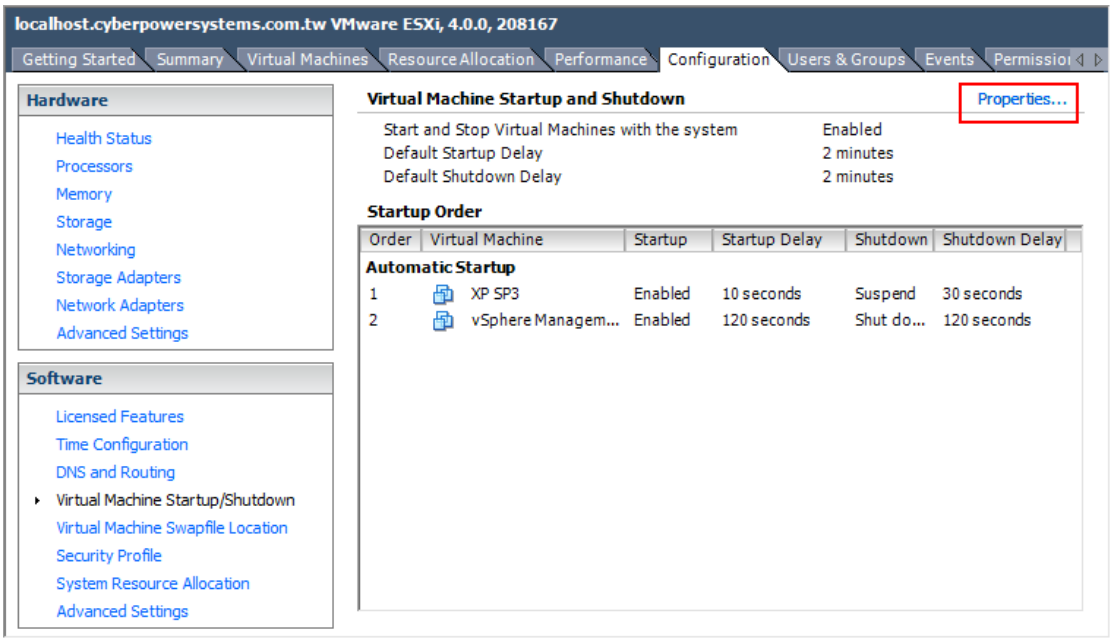


Note: *In order to allow the interactions between physical and virtual machines, VMware tools must be installed on each virtual machine. Refer to VMware ESX/ESXi Server documentation for further information about VMware Tools.*

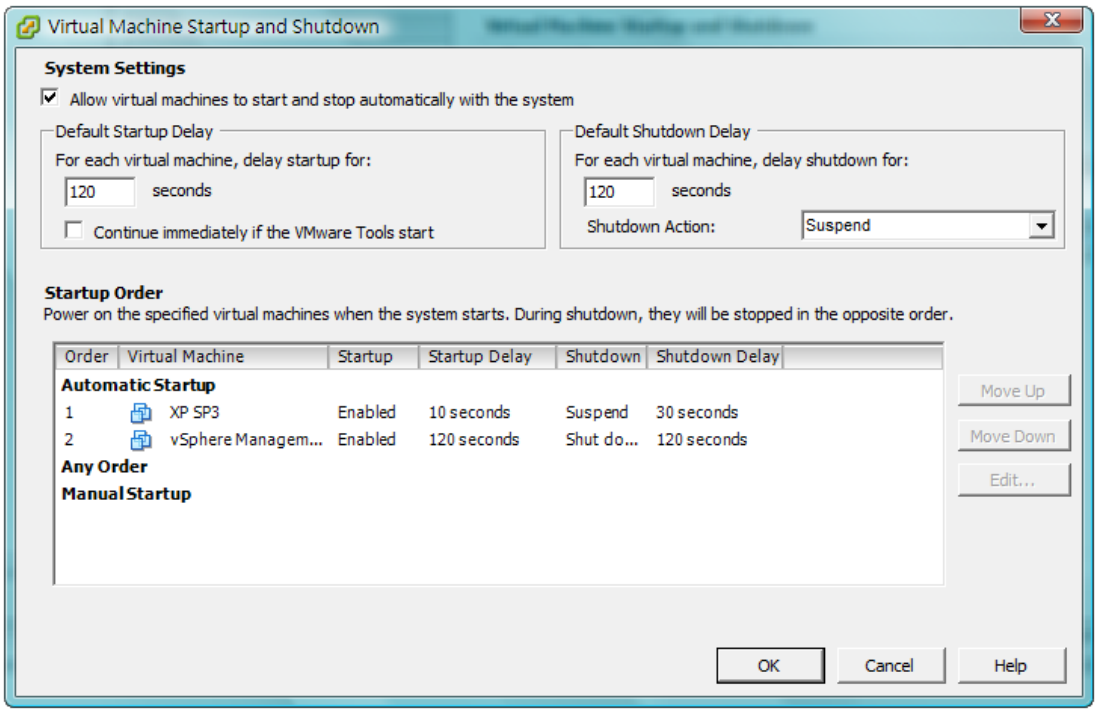
Configure Startup and Shutdown of Virtual Machines on ESX/ESXi

In order to ensure that all virtual machines and the VMware ESX/ESXi server host can be shut down and restart gracefully:

- Select the topmost VMware ESX/ESXi server host from the tree hierarchy on the left side. Go to **Configuration** → **Virtual Machine Startup/Shutdown** menu → **Properties** of the vSphere Client.



- Enable the **Allow virtual machines to start and stop automatically with the system** option

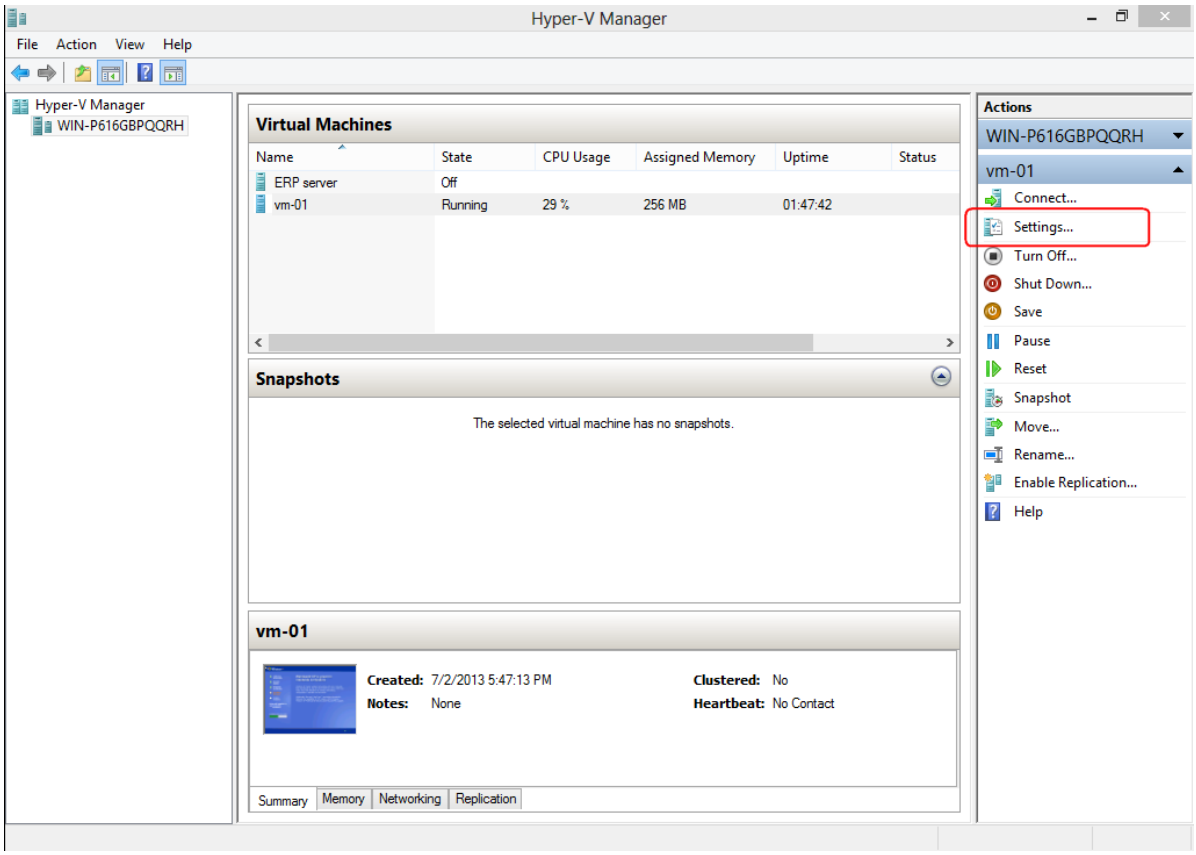


Configure Shutdown of Virtual Machines on Hyper-V Server

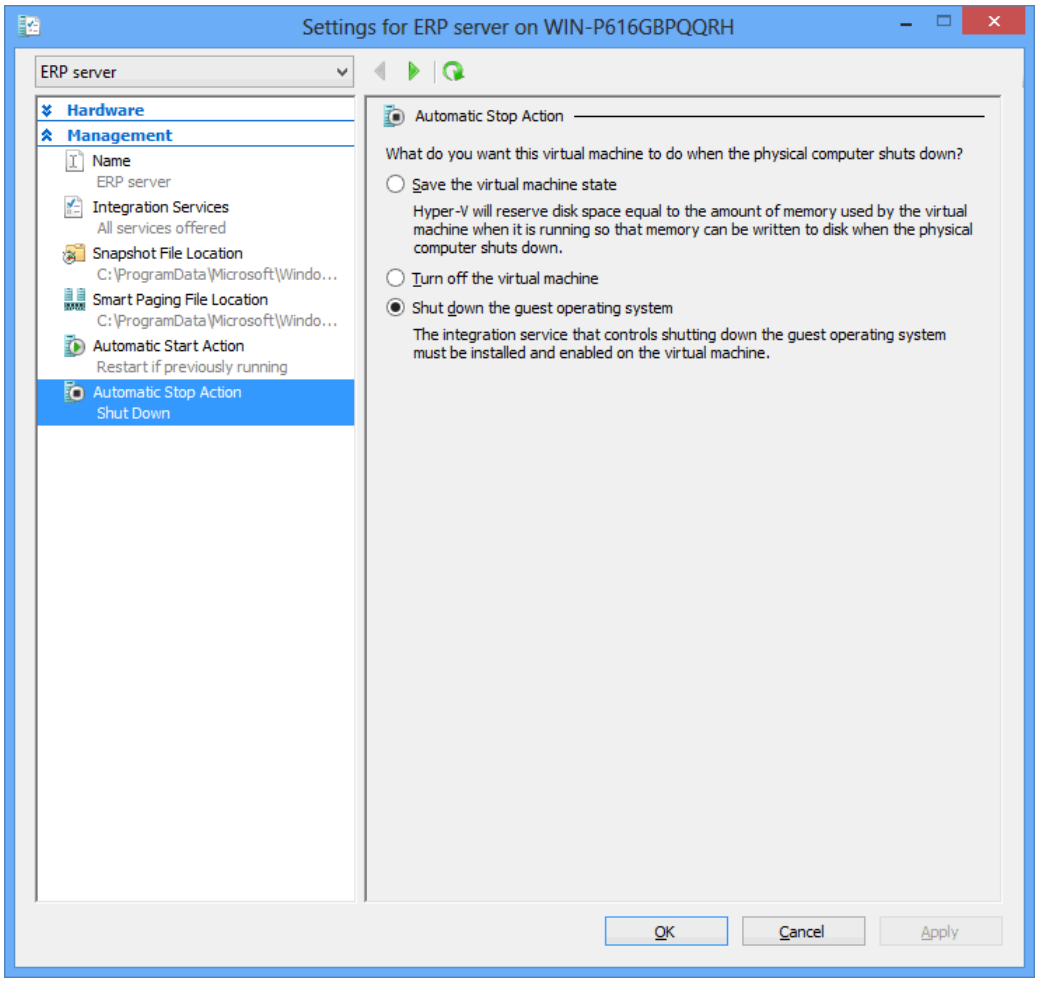
In order for the virtual machines to be shut down correctly when the Hyper-V host shuts down, users should configure a guest operating system shutdown on each virtual machine.

Follow below steps to configure the guest virtual machine to shut down with the host:

- Using the Hyper-V Manager to choose a VM and the click **Settings**.



- Choose the **Automatic Stop Action** and choose **Shut down the guest operating system**.


Settings for ERP server on WIN-P616GBPQQRH
ERP server
Hardware
Management
Name
ERP server
Integration Services
All services offered
Snapshot File Location
C:\ProgramData\Microsoft\Windo...
Smart Paging File Location
C:\ProgramData\Microsoft\Windo...
Automatic Start Action
Restart if previously running
Automatic Stop Action
Shut Down
Automatic Stop Action
What do you want this virtual machine to do when the physical computer shuts down?
Save the virtual machine state
Hyper-V will reserve disk space equal to the amount of memory used by the virtual machine when it is running so that memory can be written to disk when the physical computer shuts down.
Turn off the virtual machine
Shut down the guest operating system
The integration service that controls shutting down the guest operating system must be installed and enabled on the virtual machine.
OK
Cancel
Apply

Hyper-V server will shut itself down only after the running virtual machines shut down. Ensure that the *Necessary shutdown time* must be sufficient to support the virtual machines to shut down and the Hyper-V server to shut down.

***Note**: In order to allow the interactions between physical and virtual machines, Hyper-V Integration Service (HIS) have to be installed on each virtual machine by accessing **Insert Integration Services setup disk** item from the **Action** menu of each virtual machine's console.*
If the virtual machine is running a Linux distribution, refer to the Linux Integration Services for Hyper-V page to download and install the Linux integration service for Hyper-V.

Configure Actions for Essential Events

The **Event Action** screen lists the following critical events and action settings for each event according to actual power connection. Client will generate actions in response to events when ATS and UPS encounter the power conditions.

ATS Events

- **Both input sources have power loss, ATS will not change input source.** *ATS will not switch from one input source to another because both are experiencing power failures.*
- **Switch to redundant input source of ATS automatically.** *When the current source of ATS is power failure and another redundant source is functioning well, ATS will switch to the redundant source to afford the power to its load*.

UPS Events

- **Battery capacity is critically low.** *Battery capacity is critically low; power could be lost immediately.*
- **Output overload.** *Power consumption exceeds the power rating of UPS. If the overload is sustained, the UPS will shut off*
- **Network communication lost with UPS in a power event.** *Communication with the UPS has been lost after a power event occurred. When the utility power becomes abnormal and the UPS is using the battery to supply power, loss of network communication between the Client and UPS causes the Client to generate a critical priority event because it cannot respond to changes in the status of utility and battery power*.
- **The output power is going to stop soon.** *Output power will stop due to power event or user commands. The Client will shut down the hosted computer.*
- **Utility power failure.** *Utility power failure, battery power will be supplied***.**

***Note:** Refer to PPBE user's manual for more details about more events which are not available in this screen.*

In order to protect your computer when power events occur, you have to arrange the shutdown action for events according to below conditions:

The Client connects to the ATS which is being supplying power by one UPS.

You should arrange the shutdown action of ATS events. When the ATS encounters the power condition, the shutdown will be initiated.

The Client connects to the ATS which is being supply power by two UPS.

You should arrange the shutdown action of UPS events instead of ATS events. When both power sources of ATS which are providing power by two UPS encounter power failure, the UPS event will occur and initiate a shutdown.

After the actions are configured properly, click **Next** to the next step.

Make Sure Power Configuration is Correct

The **Finish** screen lists all power configurations through entire quick configuration. In order to make sure that your computer can be protected when power events occur, you must review the power configuration. Click **Finish** button to complete the quick configuration if the power configuration is correct.

Mass Deployment

In order to install Client on more computers and apply the same settings, users can follow below steps to complete the automatic deployment:

- **Export Profile.** Choose one target Client to export its power configuration and system settings to the profile on the **Preferences/Profile** page.
- Copy below example code to the text editor and save as new file named **setup.varfile**.

```
installModule=client
programGroupName=CyberPower PowerPanel Business Edition
installationDir=ppbe_installation_directory
profilePath=exported_zip_location
```

- Edit the **setup.varfile** to replace **installationDir** and **profilePath** parameters. **installationDir** indicates the absolute path of installation directory for Client (e.g. *C:/Programs/CyberPower PowerPanel Business Edition/PowerPanel Business Edition* or */opt/ppbe*). **profilePath** indicates the absolute path of profile (e.g. *C:/import/profile.zip* or */import/profile.zip*).
  Note. *If the installation module is* ***Center*** *and* ***Agent****, this should be* ***agent&center****; if the installation module is* ***Center*** *and* ***Client****, this should be* ***client&center****.*
- Place the **setup.varfile** and installer in the same directory. Make sure that the filename must be the same (e.g. **setup.exe** and **setup.varfile**).
- For Windows users, running the below command in the command prompt to complete the installation.

```
setup.exe –q –console –Dinstall4j.detailStdout=true
```

- For Linux users, running the below command in terminal to complete the installation.

```
sudo setup.sh –q –console –Dinstall4j.detailStdout=true
```

Note. *When you would like to upgrade the pre-installed Agent or Client during the unattended installation, set the* ***installationDir*** *parameter blank. The installer will automatically detect where preinstallation PPBE directory locates and attempt to complete the upgrade installation.*
Computers which never installed Agent or Client can be installed the PPBE by assigning a valid path. Assigning a blank path to the ***installationDir*** *parameter during the unattended installation will allow the installer to use the default path as*

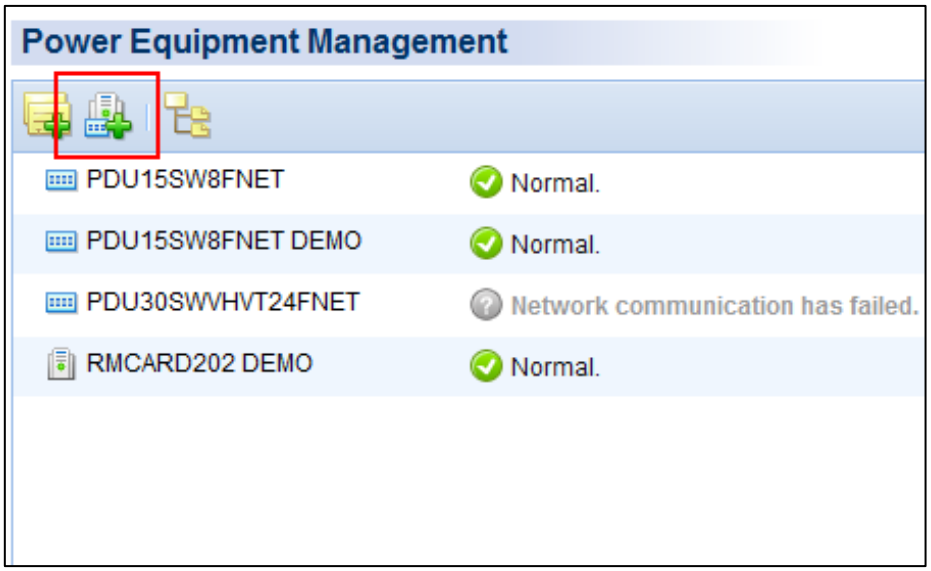
the installation directory. ***C:/Program Files/CyberPower PowerPanel Business Edition/*** *will be the default installation directory in Windows systems.* ***/opt/ppbe*** *or* ***/usr/local/ppbe*** *will be the default installation directory in most Linux distributions.*

Manage ATS in Center

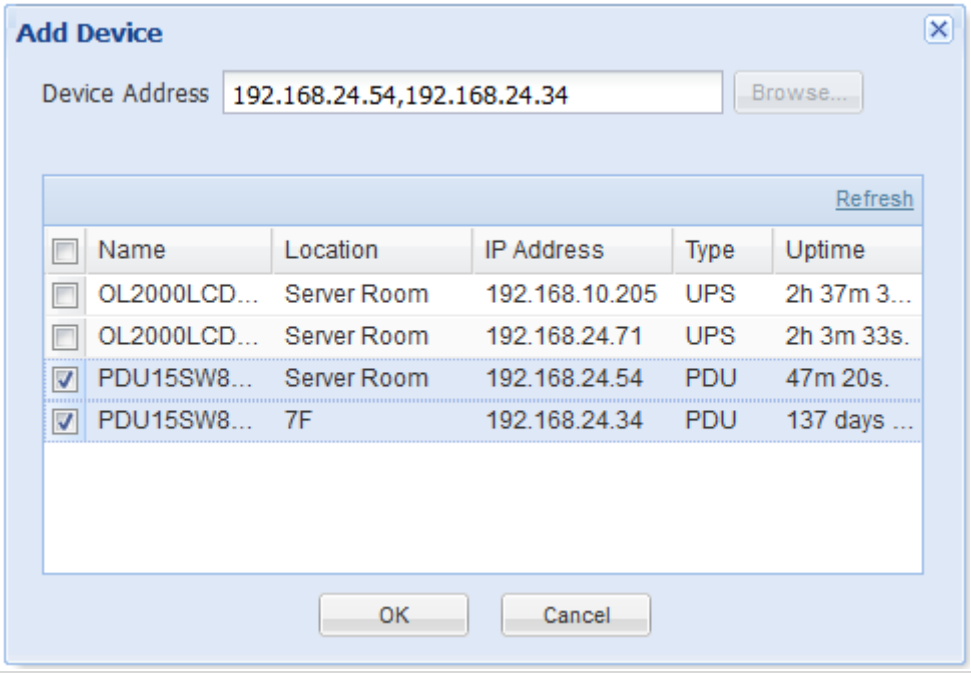
Add ATS units

Users can monitor and control multiple ATS units on the **Management/Power Equipment** page by accessing *Add Device* window in the context menu to add ATS units in Center as below:

The *Add Device* window can be accessed by clicking the *Add Device* button of the toolbar or selecting the *Add Device* of the context menu of any one group.



Either enter the ATS's IP address on the *Device Address* field or click the **Browse** button to display the device list and select the ATS address from this list. Click **OK** to proceed and add the selected ATS.



Note: *If multiple ATS units need to be added to Center, repeat aforementioned steps.*

Note: *Please refer to* ***PPBE User's Manual*** *about further details of more functions about Center.*